BRAIN RESEARCH

VOL. 545 NOS. 1/2 CONTENTS 5 APRIL 1991

Announcement from the Publisher v

Research Reports

Evidence for a critical role of GABAergic transmission within the thalamus in the genesis and control of absence seizures in the rat
Z. Liu, M. Vergnes, A. Depaulis and C. Marescaux (France) 1

Hippocampal μ-receptors mediate opioid reinforcement in the CA3 region
K.E. Stevens, G. Shiotsu and L. Stein (U.S.A.) 8

Periaqueductal gray stimulation produces a spinally mediated, opioid antinociception for the inflamed hindpaw of the rat
M.M. Morgan, M.S. Gold, J.C., Liebeskind and C. Stein (U.S.A., F.R.G.) 17

Segregation of NMDA and non-NMDA receptors at separate synaptic contacts: evidence from spontaneous EPSPs in *Xenopus* embryo spinal neurons
K.T. Sillar and A. Roberts (U.K.) 24

Development of changes in endogenous GABA release during kindling epileptogenesis in rat hippocampus
W. Kamphuis, E. Huisman, M.J. Veerman and F.H. Lopes da Silva (The Netherlands) 33

Activation of substantia nigra pars reticulata neurons: role in the initiation and behavioral expression of kindled seizures
D.W. Bonhaus, R.D. Russell and J.O. McNamara (U.S.A.) 41

A cholinergic innervation of the bovine pineal gland visualized by immunohistochemical detection of choline acetyltransferase-immunoreactive nerve fibers
P. Phansuwan-Pujito, J.D. Mikkelsen, P. Govitrapong and M. Møller (Thailand, Denmark) 49

Tricyclic antidepressants inhibit Ca^{2+}-activated K^+-efflux in cultured spinal cord neurons
G.L. Kamatchi and M.K. Ticku (U.S.A.) 59

Food restriction retards aging of the pineal gland
K.-A. Stokkan, R.J. Reiter, K.O. Nonaka, A. Lerchl, B.P. Yu and M.K. Vaughan (U.S.A., Norway, F.R.G.) 66

Hippocampal mossy fiber zinc deficit in mice genetically selected for ethanol withdrawal seizure susceptibility
D.J. Feller, D.Y. Tso-Olivas and D.D. Savage (U.S.A.) 73

Bradykinin evoked depolarization of a novel neuroblastoma × DRG neurone hybrid cell line (ND7/23)
P.M. Dunn, P.R. Coote, J.N. Wood, G.M. Burgess and H.P. Rang (U.K.) 80

Autoradiographic analysis of second messenger and neurotransmitter system receptors in the gerbil hippocampus following transient forebrain ischemia
H. Hara, H. Onodera, H. Kato, T. Araki and K. Kogure (Japan) 87

Responses of the basilar artery to products released by platelets during chronic hypertension
W.G. Mayhan (U.S.A.) 97

Distribution of extracellular tracers in perivascular spaces of the rat brain
T. Ichimura, P.A. Fraser and H.F. Cserr (U.S.A., U.K.) 103

Dorsal accessory inferior olive activity diminishes during acquisition of the rabbit classically conditioned eyelid response
L.L. Sears and J.E. Steinmetz (U.S.A.) 114

The effects of total and partial callosal agenesis on the development of paw preference performance in the BALB/cCF mouse
S.L. Schmidt, A.C. Manhães and V.Z. de Moraes (Brazil) 123

Long-lasting change in the membrane-associated protein kinase C activity in the hippocampal kindled rat
A. Daigen, K. Akiyama and S. Otsuki (Japan) 131

The positive feedback action of vasopressin on its own release from rat septal tissue in vitro is receptor-mediated
R. Landgraf, A.D. Ramirez and V.D. Ramirez (F.R.G., U.S.A.) 137

Perpetual inhibitory activity in mammalian brain slices generated by spontaneous GABA release
T.S. Otis, K.J. Staley and I. Mody (U.S.A.) 142

Monoclonal antibodies identify two novel proteins associated with vasopressin secretory granules of the rat neurohypophysis
C.M. Paden and S.J. Hapner (U.S.A.) 151

Ontogeny of the electrophysiological activity of dopaminergic cells with special reference to the influence of adrenal medullary grafts on aging
M.A. Lavín and R. Drucker-Colín (México) 164

Focal cerebral ischemia in chronic hypertension: no protection by (*R*)-phenylisopropyladenosine
S. Roussel, E. Pinard and J. Seylaz (France) 171

The relationship of hand preference to anatomy of the corpus callosum in men
S.F. Witelson and C.H. Goldsmith (Canada) 175

Induction of c-fos mRNA in cerebral cortex by excitotoxin stimulation of cortical inputs: involvement of *N*-methyl-D-aspartate receptors
H. Wood and J. de Belleroche (U.K.) 183

The nigrostriatal dopaminergic system in MPTP-treated mice shows more prominent recovery by syngeneic adrenal medullary graft than by allogeneic or xenogeneic graft
I. Date, S.Y. Felten and D.L. Felten (Japan, U.S.A.) 191

Selective reduction of glucocorticoid receptor immunoreactivity in the hippocampal formation and central amygdaloid nucleus of the aged rat
M. Zoli, F. Ferraguti, J.-Å. Gustafsson, G. Toffano, K. Fuxe and L.F. Agnati (Italy, Sweden) 199

(contents continued on p. 360)

Cited in Biological Abstracts (BIOSIS) — Chem. Abstracts — Index Medicus — Current Contents (Life Sci.) — Excerpta Medica (EMBASE) — Psychological Abstracts (PsycINFO) — PASCAL M

(contents continued)

The effects of short periods of immobilization on the hamster circadian clock
O. Van Reeth, D. Hinch, J.M. Tecco and F.W. Turek (Belgium, U.S.A.) 208
Comparative quantification of rat brain and pituitary angiotensin-converting enzyme with autoradiographic and enzymatic methods,
F.M.A. Correa, S.S. Guilhaume and J.M. Saaverda (U.S.A.) 215
Identification and localization of a kainate binding protein in the frog inner ear by electron microscopy immunocytochemistry
C.J. Dechesne, D.R. Hampson, G. Goping, K.D. Wheaton and R.J. Wenthold (U.S.A., France) 223
Effects of nicotine withdrawal on the local cerebral glucose utilization in conscious rats
H. Schröck and W. Kuschinsky (F.R.G.) 234
Distribution of synapses on fast and slow pyramidal tract neurons in the cat. An electron microscopic study
X.-b. Liu, Z.-h. Zheng, M.-c. Xi and C.-p. Wu (People's Republic of China) 239
Ionic mechanism of the outward current induced by extracellular ejection of interleukin-1 onto identified neurons of *Aplysia*
M. Sawada, N. Hara and T. Maeno (Japan) 248
Experience influences environmental modulation of function at the benzodiazepine (BZD)/GABA receptor chloride channel complex
R.J. Primus and C.K. Kellogg (U.S.A.) 257
Existence of mutual synaptic relations between corticotropin-releasing factor-containing and somatostatin-containing neurons in the rat hypothalamus
S. Hisano and S. Daikoku (Japan) 265

Short Communications

The effect of typical and atypical antipsychotic drugs on the stimulation of phosphoinositide hydrolysis produced by the 5-HT_3 receptor agonist 2-methyl-serotonin
E. Edwards, C.R. Ashby Jr. and R.Y. Wang (U.S.A.) 276
Major metabolites of (±)3,4-methylenedioxyamphetamine (MDA) do not mediate its toxic effects on brain serotonin neurons
U.D. McCann and G.A. Ricaurte (U.S.A.) 279
Effects of parabrachial opioid antagonism on stimulation-induced feeding
K.D. Carr, D.O. Aleman, T.H. Bak and E.J. Simon (U.S.A.) 283
Possible role for G-proteins in behavioral sensitization to cocaine
J.D. Steketee, C.D. Striplin, T.F. Murray and P.W. Kalivas (U.S.A.) 287
Long-term enhancement of evoked potentials in raccoon somatosensory cortex following co-activation of the nucleus basalis of Meynert complex and cutaneous receptors
H.H. Webster, D.D. Rasmusson, R.W. Dykes, R. Schliebs, W. Schober, G. Brückner and D. Biesold (Germany, Canada) 292
The presence of CO_2/HCO_3^- is essential for hypoxic chemotransduction in the in vivo perfused carotid body
M. Shirahata and R.S. Fitzgerald (U.S.A.) 297
Morphological transformation of microglia in vitro
A. Suzumura, T. Marunouchi and H. Yamamoto (Japan) 301
Actions of noradrenaline on neocortical neurons in vitro
H.-U. Dodt, H. Pawelzik and W. Zieglgänsberger (F.R.G.) 307
Potent blocking action of lead on voltage-activated calcium channels in human neuroblastoma cells SH-SY5Y
E. Reuveny and T. Narahashi (U.S.A.) 312
[^{31}P]MRS study of the protective effects of prostaglandin oligomers on forebrain ischemia in rats
M. Kurata, M. Okuda, M. Muneyuki and S.T. Ohnishi (Japan, U.S.A.) 315
N-terminal sequence of prion protein is also integrated into kuru plaques in patients with Gerstmann-Sträussler syndrome
T. Kitamoto, T. Musramoto, C. Hilbich, K. Beyreuther and J. Tateishi (Japan, Germany) 319
Increase in basic fibroblast growth factor-like immunoreactivity in rat brain after forebrain ischemia
Y. Kiyota, K. Takami, M. Iwane, A. Shino, M. Miyamoto, R. Tsukuda and A. Nagaoka (Japan) 322
Dual projections of gonadotropin releasing hormone containing neurons to the interpeduncular nucleus and the vasculature in the female rat
L. Jennes (U.S.A.) 329
Tumor necrosis factor facilitates regeneration of injured central nervous system axons
M. Schwartz, A. Solomon, V. Lavie, S. Ben-Bassat, M. Belkin and A. Cohen (Israel) 334
Corticotropin releasing factor antagonist reduces ischemic hippocampal neuronal injury
M.K. Lyons, R.E. Anderson and F.B. Meyer (U.S.A.) 339
Neurotensin effects on calcium/calmodulin-dependent protein phosphorylation in rat neostriatal slices
J. Kasckow, S.T. Cain and C.B. Nemeroff (U.S.A.) 343
Long-term cultured neurons from rat suprachiasmatic nucleus retain the capacity for circadian oscillation of vasopressin release
N. Murakami, M. Takamure, K. Takahashi, K. Utunomiya, H. Kuroda and T. Etoh (Japan) 347
Cocaine-induced behavioral sensitization is not associated with loss of GABA-immunoreactive neurons in the amygdala
M.A. Lee, J.M. Paris and K.A. Cunningham (U.S.A.) 351
Loss of D_2 receptors during aging is partially due to decreased levels of mRNA
E.R. Mesco, J.A. Joseph, M.J. Blake and G.S. Roth (U.S.A.) 355

Author Index 358